

REMARKS

Claim Amendments

Claims 2, 3 16, 20, and 22-24 have been canceled without prejudice.

Claims 1, 18, and 21 have been amended to recite the strength agents of claim 16 as filed. Claims 1 and 21 have been further amended to recite the limitation of claim 3 as filed, “wherein the dispersibility regions have a reacted cationic strength agent or a reacted nonionic strength agent in an amount that is relatively less than the reacted cationic strength agent or the nonionic strength agent present in the strength regions”.

Claim 6 has been amended to refer to “a second surface” rather than “the second surface” (emphases added) because this is the first occurrence of the term “second surface”. Support for this amendment can be found in claims 1, 5, and 6 as filed.

Claim 9 has been amended to recite “a wet strength that is at least about ten percent of the dry strength of the paper product”. Support for this amendment can be found, at least, in the last paragraph on page 10 of the application as filed.

Claim 14 has been amended to add the word “further” within the limitation “wherein the strength regions are further located on a second surface of the fibrous substrate” (emphasis added). Support for this amendment can be found, at least, in claims 13 and 14 as filed.

Claim 19 has been amended for consistency with claim 18 from which it depends.

Claim 21 has been further amended to substitute a semicolon for a comma in the third line, and to substitute “are” for “is” in the fourth line.

Applicants are not conceding in this application that the canceled claims are not patentable over the art cited by the Examiner. Nor are Applicants conceding that the amended claims would not have been patentable without the current amendments. The present claim cancellations and amendments are intended only to facilitate expeditious

allowance of valuable subject matter. Applicants respectfully reserve the right to present and prosecute these and other claims in one or more continuing applications.

Claim Objections

The 09/13/2007 Office Action included the following claim objections.

Claims 1, 9, 14, 21 and 24 are objected to because of the following informalities:

In Claims 1 and 24, the phrase “wet strength agent of at least about five percent the dry strength” appears to be missing the word “of” between “percent” and “the”.

Claim 21 uses a singular verb “is” with a plural subject in line 4 of the claim.

Claim 9 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Claim 14 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

09/13/2007 Office Action, page 2, first to sixth paragraphs.

Claim 1 has been amended to insert the word “of” between “percent” and “the”.

Claim 21 has been amended to substitute “are” for “is” in the fourth line of the claim.

Claim 9 has been amended to recite “a wet strength that is at least about ten percent of the dry strength of the paper product” (emphasis added), thereby further limiting the claim 1 requirement that the “the paper product has . . . a wet strength of at least about five percent of the dry strength of the paper product” (emphasis added).

Claim 14 has been amended to state that “the strength regions are further located on a second surface of the fibrous substrate”, thereby making abundantly clear that claim 14 requires strength regions on two surfaces of the fibrous substrate and therefore does

indeed further limit claim 13, which requires “strength regions . . . located on a first surface of the fibrous substrate”.

In view of the amendments described above and the present cancellation of claim 24, Applicants respectfully request the reconsideration and withdrawal of the objections to claims 1, 9, 14, and 21.

Claim Rejections Under 35 U.S.C. § 112, Second Paragraph

Claims 1-19 and 22-24 stand rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. 09/13/2007 Office Action, page 3, first paragraph. In particular, the Office Action states,

Claims 1-3, 8, 15, 18-19 and 22-24 recite a reacted cationic or nonionic strength agent, a reacted strength reducing material or a reacted anionic polyacrylamide but fail to recite what is meant by “reacted.”

09/13/2007 Office Action, page 3, second paragraph.

Applicants respectfully traverse this rejection to the extent it may be applicable to the claims as currently amended. Specifically, Applicants respectfully assert that a person of ordinary skill in the art would understand that the word “reacted” refers to a reaction between the strength agent and the cellulose of the paper product.

On the issue of indefiniteness, the key question is whether one of ordinary skill in the art would understand what is claimed when the claim is read in light of the specification. *Seattle Box Co., Inc. v. Indus. Crating & Packing, Inc.*, 731 F.2d 818, 826 (Fed. Cir. 1984). With respect to the present claims reciting the word “reacted”, a person of ordinary skill in the art would understand that the word “reacted” refers to a reaction between the strength agent and the cellulose of the paper product. This was true of the claims as filed and is even more true of the presently amended claims, which specifically recite strength agents known to be capable of reacting with cellulose. Applicants’ argument that a person of ordinary skill in the art would understand the term “reacted” is

further supported by the use of the word reacted in U.S. Patent No. 3,556,932 to Coscia et al., cited below. U.S. Patent No. 3,556,932 to Coscia et al., column 1, lines 50-56 (“The discovery has now been made that ionic water-soluble vinylamide polymers which are thermosetting by reason of a reacted content of glyoxal (hereinafter termed for convenience “polyvinylamides which have sufficient content of-CHOHCHO substituents to be thermosetting”) possess certain novel and beneficial properties in preferred embodiments as follows: . . .”; emphasis added).

The Office Action further states,

Claim 3 recites that the dispersability regions have a reacted strength agent in an amount relatively less than the reacted strength agents in the strength regions. It is not clear if the reacted strength agent in the dispersability regions refers to the same reacted strength agent in the strength regions or if a different reacted strength agent is applied.

09/13/2007 Office Action, page 3, last full paragraph. The Office Action further states,

Claim 8 recites a reacted strength agent. It is not clear if the reacted strength agent in the dispersability regions refers to the same reacted strength agent in Claim 1 or if a different reacted strength agent is applied.

09/13/2007 Office Action, page 4, second full paragraph. The Office Action further states,

Claim 18 recites that at least one dispersibility region has a reacted strength agent in an amount relatively less than the reacted strength agent in the at least one strength region. It is not clear if the reacted strength agent in the dispersibility region refers to the same reacted strength agent in the strength region or if a different reacted strength agent is applied.

09/13/2007 Office Action, page 4, last full paragraph. Applicants respectfully assert that claims 3, 8, and 18 are not indefinite because when these claims are given their broadest reasonable interpretation, it is clear that the reacted strength agent in the dispersibility region can be the same as or different from the reacted strength agent in the strength regions. (Although claim 3 is currently canceled, its limitation has been incorporated into

claims 1 and 21. Applicants are therefore addressing the rejection of claim 3 to the extent that the same rejection would apply to claims 1 and 21 as currently amended.)

The Office must give a claim its broadest reasonable interpretation. *See, e.g.,* MPEP 2111; *Phillips v. AWH Corp.* 415 F.3d 1303 (Fed. Cir. 2005) (*en banc*). Based solely on the underlined occurrences of the word “a” in the phrase “wherein the dispersibility regions have a reacted cationic strength agent or a reacted nonionic strength agent”, it is clear that the strength agent in the dispersibility regions of claims 3, 8, and 18 need not be the same as the strength agent in the strength regions of these claims. If Applicants had intended to require that the same strength agent be used in the strength and dispersibility regions, the word “the” would have been used in place of the word “a” in the above phrase. Accordingly, when claims 3, 8, and 18 are given their broadest reasonable interpretation – as they must be – it is clear that the strength agent in the dispersibility regions need not be the same as the strength agent in the strength regions.

The Office Action further states,

Claim 4 recites a “grid-shaped pattern of linearly shaped regions.” It is not clear whether the linearly shaped regions are lines, elongated rectangles, bars or stripes, or some other shape. The Specification fails to define what is meant by linearly shaped regions.

09/13/2007 Office Action, paragraph bridging pages 3 and 4. Claim 4 has been amended to recite the limitation, “wherein the strength regions comprise a grid-shaped pattern of parallel and perpendicular linear regions on the surface of the fibrous substrate”, thereby making clear that the linear regions are lines that define a rectangular grid. Support for the amendment can be found, at least, on page 8, lines 20-21 of the application as filed. This amendment deletes the term “linearly shaped” that gave rise to the rejection.

The Office Action further states,

Claim 6 recites “the second surface of the fibrous substrate” in Claim 1. There is insufficient antecedent basis for this limitation in the claim.

09/13/2007 Office Action, page 4, first full paragraph. Applicants have amended claim 6 to refer to “a second surface of the fibrous substrate”. This amendment removes the word “the” that presumably caused the antecedent basis problem to which the rejection refers.

The Office Action further states,

Claim 13 recites that the strength regions are located on a first surface of the fibrous substrate. Claim 14 recites that the strength regions are located on a second surface of the fibrous substrate. Since Claim 14 depends from Claim 13, it is not clear if the intention is to locate strength regions on both a first and a second surface of the substrate or if Claims 13 and 14 recite alternative locations for the strength regions.

09/13/2007 Office Action, page 4, third full paragraph. As mentioned above in the context of the claim objections, claim 14 has been amended to state that “the strength regions are further located on a second surface of the fibrous substrate”, thereby making abundantly clear that claim 14 requires strength regions on two surfaces of the fibrous substrate.

The Office Action further states,

Claim 16 recites “the cationic strength agent” and “the nonionic strength agent” in Claim 14, which depends from Claim 1. There is insufficient antecedent basis for these limitations in the claim.

09/13/2007 Office Action, page 4, fourth full paragraph. This rejection is rendered moot by the present cancellation of claim 16.

The Office Action further states,

Claim 19 recites that the strength regions encompass an area that is less than about 50% of the area of the first surface. It is not clear if the intention is that the strength regions on all surfaces encompass an area that is les[s] than about 50% of the area of the first surface or if the strength regions are located on the first surface and encompass an area that is les[s] than about 50% of the area of the first surface.

09/13/2007 Office Action, paragraph bridging pages 4 and 5. Claim 19 has been amended to recite the limitation, “wherein the at least one strength region encompasses

an area that is less than about 50% of the area of the first surface”, thereby making clear that the strength regions on all surfaces encompass an area that is less than about 50% of the area of the first surface. There is no reasonable basis to interpret this limitation as relating only to the strength regions located on the first surface because the claim 18 strength regions are not limited to the first surface.

The Office Action further states,

Claim 22 recites that “the strength region is a reacted cationic or nonionic strength agent.” It is not clear how the strength region can be the strength agent.

09/13/2007 Office Action, page 5, first full paragraph. This rejection is rendered moot by the present cancellation of claim 22.

The Office Action further states,

Claim 23 recites in feature (b) “a plurality of strength regions throughout at least one fibrous substrate”. It is not clear if the fibrous substrate is the same fibrous substrate as the “at least one fibrous substrate” recited in feature (a) or a different fibrous substrate.

09/13/2007 Office Action, page 5, second full paragraph. This rejection is rendered moot by the present cancellation of claim 23.

For all of the above reasons, and in view of the present cancellation of claims 16, and 22-24, Applicants respectfully request the reconsideration and withdrawal of the rejection of claim 1-15 and 17-19 under 35 U.S.C. § 112, second paragraph.

Anticipation or Obviousness Rejection over Costanza + Batra

Claims 1-6, 9-15 and 18-23 stand rejected under 35 U.S.C. § 102(b), as allegedly anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. Patent No. 3,707,430 to Costanza et al (“Costanza”) as evidenced by U.S. Patent No. 6,162,327 to Batra et al (“Batra”). 09/13/2007 Office Action, page 6, first full paragraph 1.

Applicants respectfully traverse this rejection to the extent it may be applicable to the claims as currently amended.

Costanza generally describes toilet-flushable sanitary products capable of absorbing body-discharge such as diapers and sanitary napkins. Costanza abstract. The sanitary products comprise a scrim or paper of biodegradable fibers such as cellulosic fibers, and padding of water-dispersible absorbent material. *Id.* Costanza teaches the use of several specific types of polymers that are stable in body-discharge yet capable of being degraded upon addition of a suitable degrading agent. These include

copolymers of ethylenically unsaturated mono-and polycarboxylic acids with ethylenically unsaturated esters or nitriles such as copolymers of acrylic or methacrylic acid and an alkyl acrylate or methacrylate, e.g., ethyl acrylate, methyl methacrylate, etc., or with acrylonitrile; carboxy ester lactones; copolymers of alpha, beta, ethylene dicarboxylic acids such as maleic acid and vinyl compounds 30 such as styrene; polyacrylic acid-polyether additives, styrene-monoethyl maleate heteropolymers, itaconic acid polymers, and the like * * * [and] copolymers of aminoacrylates such as dimethylaminomethacrylate and an alkyl acrylate such as ethyl acrylate, polyvinylpyridines, etc.

Costanza, column 4, lines 22-45.

Batra generally describes a multifunctional tissue paper product alleged to have a combination of good wet strength, flexibility and preferably absorbency. Batra abstract. Batra appears to be cited solely for its teaching of "basis weights of commercially available tissue products". 09/13/2007 Office Action, page 7, second full paragraph.

Applicants respectfully assert that claims 1-6, 9-15 and 18, 19, 21, and 22 are neither anticipated by nor obvious over Costanza as evidenced by Batra because the cited references do not teach or suggest a reacted cationic strength agent or reacted nonionic strength agent selected from the group consisting of cationic glyoxalated polyacrylamides, nonionic glyoxalated polyacrylamides, polymeric amine-epichlorohydrin resins, polyethyleneimines, melamine formaldehydes, urea formaldehydes, dialdehyde starches, glyoxal, polvinyl amines, vinyl amine copolymers, and mixtures thereof.

Anticipation requires that all of the limitations of the claim be found within a single prior art reference. *Scripps Clinic & Research Foundation v. Genentech, Inc.*, 927 F.2d 1565, 1576 (Fed. Cir. 1991). For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a prima facie case of obviousness. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). Establishing a prima facie case of obviousness requires that all limitations of the claim be taught or suggested by the prior art. See, e.g., *CFMT, Inc. v. Yieldup Intern. Corp.*, 349 F.3d 1333, 1342 (Fed. Cir. 2003); *In re Royka*, 490 F.2d 981, 985 (C.C.P.A. 1974).

Applicants' independent claims 1, 18, 21, and 22 each recite the presence of a strength agent selected from the group consisting of cationic glyoxalated polyacrylamides, nonionic glyoxalated polyacrylamides, polymeric amine-epichlorohydrin resins, polyethyleneimines, melamine formaldehydes, urea formaldehydes, dialdehyde starches, glyoxal, polvinyl amines, vinyl amine copolymers, and mixtures thereof. The Office has not established that Costanza or Batra teaches or suggests any of these strength agents, and it is noteworthy that original claim 16, which recites these strength agents, was not subject to the present rejection. Accordingly, Costanza and Batra fail to teach or suggest the strength agent of Applicants' currently amended independent claims, and these references neither anticipate or render obvious Applicants' independent claims. Given that claims 20, 23, and 24 have been canceled, and given that claims 2-6, 9-15, and 19 depend from and further limit one of claims 1 and 18, Applicants respectfully request the reconsideration and withdrawal of the rejection of claims 1-6, 9-15, 18, 19, 21, and 22 under 35 U.S.C. § 102(b) or § 103(a) over Costanza as evidenced by Batra.

Obviousness Rejection over Sheppard + Orarian + Drelich

Claims 1-2, 4-5, 9-13 and 15-21 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over U.S. Patent No. 3,702,610 to Sheppard et al ("Sheppard") in view of U.S. Patent No. 6,017,418 to Orarian et al ("Orarian") and evidenced by U.S. Patent No. 3,865,775 to Drelich et al ("Drelich"). 09/13/2007 Office Action, page 7, last

paragraph. Applicants respectfully traverse this rejection to the extent it may be applicable to the claims as currently amended.

Sheppard generally describes a means for indicating when a sanitary napkin or diaper wrapped with a web bonded with a spaced pattern of water-dispersible adhesive is in condition for flushing away after it is dropped in a toilet for disposal. Sheppard abstract.

Orarian generally describes hydrophilic, humectant, soft, pliant, single-ply or multiply absorbent papers in the form of napkin, towel, bathroom tissue or facial tissue. Orarian abstract.

Drelich generally describes a resin binder composition comprising: (1) a synthetic resin; (2) a water-soluble, polymeric, carboxylic thickener; and (3) a metal ammine complex coordination compound capable of releasing ions of said metal to control the total migration of the resin binder during its deposition on a fibrous web. Drelich abstract.

Applicants respectfully assert that independent claims 1, 18, and 21 are patentable over Sheppard, Orarian, and Drelich because the cited references do not teach or suggest adding strength agent to the dispersibility region in an amount less than the amount of the strength agent added to the strength region. Applicants' claims 1 and 21 include the limitation, "wherein the dispersibility regions have a reacted cationic strength agent or a reacted nonionic strength agent in an amount that is relatively less than the reacted cationic strength agent or the nonionic strength agent present in the strength regions". Similarly, claim 18 includes as element (c), "at least one dispersibility region comprising a reacted cationic strength agent or a reacted nonionic strength agent in an amount that is relatively less than the reacted cationic strength agent or the reacted nonionic strength agent present in the at least one strength region". Thus, each of the rejected independent claims require addition of strength agent to the dispersibility region. Applicants respectfully assert that none of the cited references teach or suggest this limitation. Accordingly, a prima facie case of obviousness has not been established, and claims 1,

18, and 21 are patentable over Sheppard, Orarian, and Drelich. Accordingly, and given that claims 2 and 20 have been canceled, Applicants respectfully request the reconsideration and withdrawal of the rejection of claims 1, 4-5, 9-13 and 15-19, and 21 under 35 U.S.C. § 103(a) over Sheppard, Orarian, and Drelich.

Obviousness Rejection over Sheppard + Orarian + Drelich + Champaigne

Claim 16 stands rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Sheppard in view of Orarian and evidenced by Drelich and further in view of U.S. Patent No. 3,616,797 to Champaigne, Jr. et al. ("Champaigne"). 09/13/2007 Office Action, page 11, first full paragraph. This rejection is rendered moot by the present cancellation of claim 16.

Obviousness Rejection over Sheppard + Orarian + Drelich + Srinivasan

Claims 6, 14, and 22 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Sheppard in view of Orarian and evidenced by Drelich and further in view of U.S. Patent No. 3,913,579 to Srinivasan et al ("Srinivasan"). 09/13/2007 Office Action, page 12, second paragraph. Applicants respectfully traverse this rejection to the extent it may be applicable to the claims as currently amended.

Sheppard, Orarian, and Drelich are discussed above.

Srinivasan generally describes a sanitary napkin which includes a flushable absorbent pad and an extremely flushable nonwoven fibrous cover that is bonded with a totally water-soluble resinous binder. The Office Action appears to rely on Srinivasan for its teachings related to the use of hot melt adhesive on the fibrous cover. 09/13/2007 Office Action, paragraph bridging pages 12 and 13.

Claims 6 and 14 both depend ultimately from claim 1. As noted above, Sheppard, Orarian, and Drelich fail to teach or suggest the claim 1 limitation, "wherein the dispersibility regions have a reacted cationic strength agent or a reacted nonionic strength agent in an amount that is relatively less than the reacted cationic strength agent or the nonionic strength agent present in the strength regions". Srinivasan does not cure this

deficiency. Accordingly, a prima facie case of obviousness has not been established against claims 6 and 14. Given the present cancellation of claim 22, Applicants respectfully request the reconsideration and withdrawal of the rejection of claims 6 and 14 under 35 U.S.C. § 103(a) over Sheppard, Orarian, Drelich, and Srinivasan.

Obviousness Rejection over Sheppard + Orarian + Drelich + Costanza

Claims 6, 14, 22, and 23 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Sheppard in view of Orarian and evidenced by Drelich and further in view of Costanza. 09/13/2007 Office Action, page 13, second full paragraph 2. Applicants respectfully traverse this rejection to the extent it may be applicable to the claims as currently amended.

All the cited references are discussed above.

Claims 6 and 14 both depend ultimately from claim 1. As noted above, Sheppard, Orarian, and Drelich fail to teach or suggest the claim 1 limitation, “wherein the dispersibility regions have a reacted cationic strength agent or a reacted nonionic strength agent in an amount that is relatively less than the reacted cationic strength agent or the nonionic strength agent present in the strength regions”. Costanza does not cure this deficiency. Accordingly, a prima facie case of obviousness has not been established against claims 6 and 14. Given the present cancellation of claims 22 and 23, Applicants respectfully request the reconsideration and withdrawal of the rejection of claims 6 and 14 under 35 U.S.C. § 103(a) over Sheppard, Orarian, Drelich, and Costanza.

Obviousness Rejection over Sheppard + Orarian + Drelich + Sun

Claims 7 and 8 stand rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Sheppard in view of Orarian and evidenced by Drelich and further in view of U.S. Patent No. 6,322,665 to Sun et al (“Sun”). 09/13/2007 Office Action, page 14, first full paragraph. Applicants respectfully traverse this rejection to the extent it may be applicable to the claims as currently amended.

Sheppard, Orarian, and Drelich are discussed above.

Sun generally describes methods for making high wet performance webs, the methods comprising heterogeneously applying a polymeric anionic reactive compound to a cellulosic fibrous web followed by curing of the compound to crosslink the cellulose fibers. Sun abstract.

Claims 7 and 8 both depend ultimately from claim 1. As noted above, Sheppard, Orarian, and Drelich fail to teach or suggest the claim 1 limitation, “wherein the dispersibility regions have a reacted cationic strength agent or a reacted nonionic strength agent in an amount that is relatively less than the reacted cationic strength agent or the nonionic strength agent present in the strength regions”. Sun does not cure this deficiency. Accordingly, a prima facie case of obviousness has not been established against claims 7 and 8. Applicants therefore respectfully request the reconsideration and withdrawal of the rejection of claims 7 and 8 under 35 U.S.C. § 103(a) over Sheppard, Orarian, Drelich, and Sun.

Obviousness Rejection over Sheppard + Coscia + Drelich

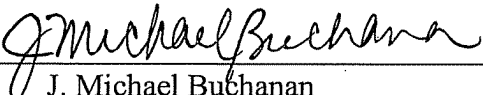
Claim 24 stands rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over Sheppard in view of U.S. Patent No. 3,556,932 to Coscia et al (“Coscia”; erroneously cited as U.S. Patent No. 6,017,418) and evidenced by Drelich. 09/13/2007 Office Action, page 15, second paragraph. Applicants respectfully traverse this rejection to the extent it may be applicable to the claims as currently amended. This rejection is rendered moot by the present cancellation of claim 24.

It is believed that the foregoing amendments and remarks fully comply with the Office Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and allowance is respectfully requested.

If there are any additional charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130 maintained by Assignee.

Respectfully submitted,

CANTOR COLBURN LLP
Applicants' Attorneys

By: 
J. Michael Buchanan
Registration No. 44,571

Date: March 11, 2008
Customer No.: 23413
Telephone: (860) 286-2929